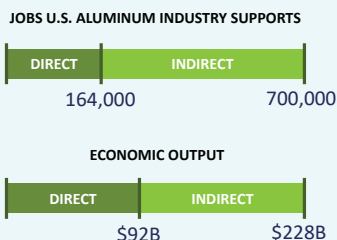


# Powering Up American Aluminum: A Roadmap for Next Generation Supply Chain Resilience

## An Essential Element for U.S. Economic & National Security

### JOBS & IMPACT



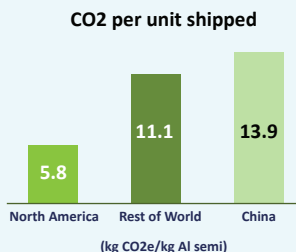
Record economic impact, recycling and sheet/plate jobs in 2024.

### NATIONAL SECURITY



Aluminum supports the American warfighter.

### ENERGY LEADER



Domestically made aluminum is among the most energy-efficient aluminum in the world.





### CRITICAL MINERAL





All recognize aluminum is critical to defense and economy.

The aluminum industry looks very different than it did 25 years ago.

### Since 2000:

-  Operating U.S. primary aluminum smelters declined from 24 to 4 today due to lack of low-cost domestic electricity and unfair trade practices in China.
-  North America went from producing the most primary aluminum on earth to 4th place today with output dwarfed by China.
-  Demand for aluminum grew consistently as the U.S. industry evolved and shifted its business mid-and-downstream.
-  Domestic aluminum recycling grew by ~1/3 and now accounts for ~85% of U.S.-made aluminum.

But it continues to grow and invest in America.

  \$10+ Billion invested in U.S. operations over the past decade.

2 new aluminum rolling mills under construction for the first time since 1980.

Nearly 98% of today's aluminum industry jobs are in mid-and-downstream processing and recycling.



U.S. primary aluminum jobs

Today, the U.S. aluminum industry needs more access to energy and metal.

The U.S. aluminum industry is effectively "short" ~4 million tons of raw, unwrought metal that we are unable to supply through primary production or domestic recycling.

4M MT  
Ingot/Raw  
Aluminum Imports


5M MT  
U.S. Secondary/  
Recycled Production




Total U.S.  
aluminum  
supply

1.5M MT  
Semi-fabricated  
Aluminum Imports


700K MT  
U.S. Primary  
Production

 An aluminum smelter is extremely energy intensive – with a single smelter using about as much electricity in a year as a city like Boston or Nashville.

 The Energy Information Administration estimates that the United States will have an energy deficit of

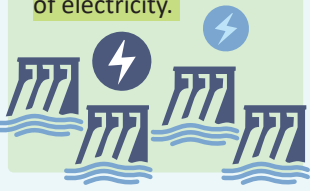
~50  
TWh by 2035.

We make up for this gap today mainly through our trading relationship with Canada which is a good deal for America.




Canada makes some of the cleanest, most energy-efficient aluminum in the world.

The aluminum the U.S. imports from Canada each year = more than 4 Hoover Dams worth of electricity.

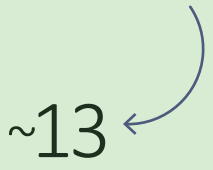


Aluminum smelters in Canada pay \$25 - \$40 per MWh of electricity vs. \$60 - \$80 per MWh in the United States.




1 Canadian aluminum smelter job equals

~13 U.S. aluminum jobs further downstream.



To make the cars and cans Americans want...and the fighter jets, tanks and critical infrastructure Americans need, we need access to Canadian aluminum.



### 3 Options to Close the U.S. Aluminum Metal Gap

There are three main paths to make America American aluminum more self-sufficient for its aluminum needs.

3 Main Paths	Capital Cost	Timeframe	Energy Needed	Power Contract	Metal Supply	Direct Job Creation
1 Build New Primary Aluminum Smelters (750,000 MT per smelter)	\$4B – 6B /smelter	5 – 6 years	11.1 TWh	20 years	~5 new smelters to meet existing U.S. metal supply gap	800 jobs /smelter
2 Restart Idled Aluminum Smelters (601,000 MT for all idled restarts)	\$100 – \$500M /all restarts	6 – 15 months /restart	8.9 TWh	10 years	Restarting ALL idled U.S. smelters would meet ~15% of existing U.S. metal supply gap	1,350 jobs to restart all smelters
3 Expand Recycled Aluminum Production (345,000 MT per new aluminum recycling facility)	\$400 – \$600M /Recycling facility	12– 18 months	0.276 TWh	Annual	Collecting and recycling the estimated 1 - 2 million MT of usable scrap currently landfilled or exported would meet 25% - 50% of the existing U.S. metal supply gap.	677 new jobs/ facility

#### Data center/ AI competition

Demand for electricity from data centers to double by 2030

Data centers can pay up to \$115/MWh

Electricity costs above \$40/MWh make aluminum smelters unviable

### What Can Policymakers Do?

#### Energy/Manufacturing

- Expand access to abundant, affordable energy for manufacturers
- Pursue permitting reform to help manufacturers build
- Support natural gas production, pipeline expansion and explore new energy sources

#### Trade

- Ensure tariff-free access to Canadian aluminum imports to support U.S. metal demand
- Expand the list of aluminum derivative products covered under Section 232 tariffs
- Pursue a re-negotiated USMCA to secure North America from unfairly traded metal

#### Recycling

- Increase the availability of scrap aluminum to manufacturers:
  - Invest in new recycling infrastructure including technology to sort recyclable metal so that it can be used as input material.
  - Encourage recycling through consumer-facing collection infrastructure and state policies that create financial incentives to recycle.
- Support policies that keep scrap aluminum at home for domestic consumption and production.